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Safety Factor of Anisotropic Bars in the Space of Generalized Forces

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Abstract

© 2017, Springer Science+Business Media New York.Bars of arbitrary shape made of a homogeneous anisotropic material are considered. In the general case, in their cross section, nonzero are all internal force factors (IFF) — three forces and three moments. The values of the IFF are known from solutions of the corresponding problem. The safety factor for the load-carrying capacity of the beams is determined by comparing the known vector R∗ of IFF with the corresponding desired strength vector R in the IFF space.

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Keywords

bar, homogeneous anisotropic material, load-carrying capacity, safety factor

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